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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/651,096

08/30/2000

Katsutoshi Iwamura

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1888

7590

07/13/2004

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EXAMINER

EBRAHIMI DEHKORDY, SAEID

ART UNIT

PAPER NUMBER

2626

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/651,096

**Applicant(s)**

IWAMURA, KATSUTOSHI

**Examiner**

Saeid Ebrahimi-dehKordy

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukumoto et al (U.S. Patent 5,555,462)

Regarding claim 1 and 16 Fukumoto et al disclose: A control unit for controlling a motor for use in a printer (please note column 10 lines 44-48) comprising: a position counter to count output pulses of an encoder that rotates to follow rotation of the motor (please note column 7 lines 36-51 and also column 8 lines 3-17) and thereby detect a position of a printing medium transferred by the motor (please note column 6 lines 37-41) a target control amount modifying and calculating part to calculate a modified target value of a feed-amount of the printing medium based on a target value of a feed-amount of the printing medium and a previous stop position of the printing medium detected by the position counter (please note column 6 lines 31-41 and also column 3 lines 47-64) and set a counted value of the position counter to the modified target value (please note column 14 lines 23-30) and a position control part to control the motor so that the counted value of the position counter falls into a predetermined range including zero (please note column 9 lines 7-20).

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Regarding claim 2,8 and 11 Fukumoto et al disclose: A control unit for controlling a motor for use in a printer (please note column 10 lines 44-46) as set forth in claim 1, wherein the printing medium is a paper and the motor is a paper-feed motor (please note column 8 lines 18-23).

Regarding claim 3,9,12 and 20 Fukumoto et al disclose: A control unit for controlling a motor for use in a printer, as set forth in claim 1, wherein the position control part performs PID control (please note column 7 lines 36-51).

Regarding claim 4 and 13 Fukumoto et al disclose: A control unit for controlling a motor for use in a printer, as set forth in claim 1, wherein the position counter counts-up or counts-down the output pulses according a normal or reverse rotation of the motor (please note column 10 lines 37-50).

Regarding claim 5,14,17 and 21 Fukumoto et al disclose: A control unit for controlling a motor for use in a printer comprising: a position detecting part to detect a position of a printing medium transferred by the motor (please note column 6 lines 21-41) a target position modifying and calculating part to calculate a modified target position of the printing medium based on a target value of a feed-amount of the printing medium at the present motor start-up (please note column 3 lines 47-64) another target value of a feed-amount of the printing medium at a previous motor start-up (please note column 3 lines 23-39) and a position of the printing medium detected by the position detecting part just before the present motor start-up (please note column 10 lines 36-50) and a position control part to control the motor based on positional deviation of the

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position detected by the position detecting part from the modified target position (please note column 6 lines 31-41).

Regarding claim 6 and 15 Fukumoto et al disclose: A control unit for controlling a motor for use in a printer, as set forth in claim 5, wherein the target position modifying and calculating part includes: an error calculating part to calculate an error of the feed-amount of the printing medium at the previous motor start-up based on a target value of a control amount at a previous motor start-up and the position detected by the position detecting part just before the present motor start-up; and an adder to add the target value of a feed-amount of the printing medium at the present motor start-up and the error (please note column 8 lines 60-67 and column 9 lines 1-5).

Regarding claim 7 Fukumoto et al disclose: A control unit for controlling a motor for use in a printer, as set forth in claim 6, wherein the position detecting part is a position counter to count output pulses of an encoder that rotates to follow rotation of the motor (please note column 7 lines 36-51 and also column 8 lines 3-17) and the target position modifying and calculating part further includes a reset signal generating part to generate a reset signal for resetting a counted value of the position counter (please note column 10 lines 27-50).

Regarding claim 10 and 23 Fukumoto et al disclose: A control method of controlling a motor for use in a printer comprising the steps of: counting output pulses of an encoder that rotates to follow rotation of the motor (please note column 7 lines 36-51 and also column 8 lines 3-17) and detecting a position of a printing medium transferred by the motor by a position counter (please note column 6

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lines 37-41) calculating an modified target value of a feed-amount of the printing medium based on a target value of a feed-amount of the printing medium and a previous stop position of the printing medium detected by the position counter (please note column 6 lines 31-41 and also column 3 lines 47-64) and setting a counted value of the position counter to the modified target value (please note column 14 lines 23-30) and controlling the motor so that the counted value of the position counter falls into a predetermined range including zero (please note column 9 lines 7-20).

Regarding claim 18 A control unit for controlling a motor for use in a printer comprising: a position counter to detect a position of a sheet of paper transferred by a paper-feed motor based on output pulses of an encoder that rotates to follow rotation of the paper-feed motor (please note column 7 lines 36-51 and also column 8 lines 3-17, also please note column 6 lines 37-41) a driving part to apply a current value to the paper-feed motor based on a target value of a feed-amount of the sheet of paper and an output of the position counter to drive the paper-feed motor (please note column 6 lines 31-41 and also column 3 lines 47-64) a current value signal generating part to determine whether the absolute value of deviation of the output of the position counter from the target value of the feed-amount of the sheet of paper falls in the range of a first predetermined value to a second predetermined value smaller than the first predetermined value during stoppage of the paper-feed motor (please note column 7 lines 36-67 and column 8 lines 1-2) to generate a current value signal when the absolute value of deviation falls in the range, so that the deviation becomes zero

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wherein the driving part drives the paper-feed motor based on the current value signal (please note column 9 lines 32-67 and column 10 lines 1-20).

Regarding claim 19 Fukumoto et al disclose: A control unit for controlling a motor for use in a printer, as set forth in claim 18 further comprising a paper delivery part for performing a paper delivery operation, wherein the current value signal generating part feeds a paper delivery command to the paper delivery part when the absolute value of deviation is larger than the first predetermined value thus the paper delivery part performs the paper delivery operation (please note column 8 lines 24-42).

Regarding claim 22 Fukumoto et al disclose: A control method of controlling a motor for use in a printer, as set forth in claim 20 further comprising the step of performing a paper delivery operation when the absolute value of the deviation is larger than the first predetermined value (please note column 7 lines 57-65).

### **Contact Information**

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Saeid Ebrahimi-Dehkordy* whose telephone number is (703) 306-3487.

The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams, can be reached at (703) 305-4863.

**Any response to this action should be mailed to:**

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Assistant Commissioner for Patents

Washington, D.C. 20231

**Or faxed to:**

(703) 872-9306, or (703) 308-9052 (for **formal** communications; please mark

**"EXPEDITED PROCEDURE"**)

**Or:**

(703) 306-5406 (for **informal** or **draft** communications, please label "PROPOSED" or "DRAFT")

**Hand delivered responses** should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

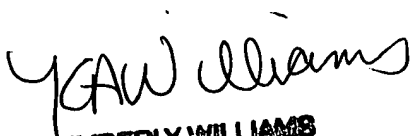
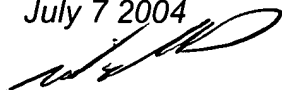
Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 305-4750.

*Saeid Ebrahimi-Dehkordy*

*Patent Examiner*

*Group Art Unit 2626*

*July 7 2004*



**KIMBERLY WILLIAMS**  
**SUPERVISORY PATENT EXAMINER**